

### **ABSTRACT**

A method of fabricating polycrystalline silicon thin film transistor according to the present invention includes: depositing a buffer layer on a substrate; depositing an amorphous silicon layer on the buffer layer with a predetermined thickness; crystallizing the deposited amorphous silicon layer by using a laser to form a polycrystalline silicon layer; etching the crystallized polycrystalline silicon layer to a predetermined thickness; curing the etched polycrystalline silicon layer; and patterning the cured polycrystalline silicon layer to form a semiconductor layer.